AMENDMENTS TO THE CLAIMS

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

17. (currently amended) A method of determine the birth date of a ~~biomolecule~~ tooth enamel in ~~a~~ an ~~organism population~~ animal comprising the steps of:

(a) collecting a sample of said ~~biomolecule~~ tooth enamel from an ~~organism population~~ animal; wherein said ~~biomolecule~~ tooth enamel is purified away from other carbon containing molecules of said ~~organism population~~ animal;

(b) determining a delta 14C value of the carbon atoms in said ~~biomolecule~~ tooth enamel; and

(c) comparing the delta 14C value with a calibration delta 14C chart ~~to determine~~ and determining a birth date of said ~~biomolecule by~~ tooth enamel, wherein the birth date of said tooth enamel is determined to within 5 years of its actual birth date.

18-20. (canceled)

21. (currently amended) The method of claim ~~20~~ 17, wherein said animal is selected from the group consisting of a human, a horse, a pig, a cow, a rabbit, a dog, a rat and a mouse.

22. (original) The method of claim 17, wherein said delta 14C value is determined by an accelerator mass spectrometer (AMS).

23. (currently amended) The method of claim 17 further comprising a step of calculating a birth date of said animal from the birth date of said ~~biomolecule~~ tooth

enamel.

24-31. Canceled.

32. (new)   The method of claim 17 wherein said calibration delta 14C chart is selected from a calibration delta 14C chart shown in Figure 1.

33. (new)   The method of claim 17 wherein said delta 14C chart is selected from the group consisting of a chart shown in Figure 1A, Figure 1B, Figure 1C, Figure 1D and Figure 1E.